

Compact Femtosecond Fiber Laser

LIGHTWIRE FF50 SERIES



LightWire FF50 series is a cost effective turn-key femtosecond fiber laser system with femtosecond pulse fiber delivery all the way to your sample. Based on a well-established MOPA scheme, LightWire FF50 model laser delivers a reliable hands free operation due to all-in-fiber construction.

HP option brings extra power needed for your experiment, Grating compressor (FemtoGrate) option gives you flexibility to deliver optimally compressed or chirped pulses to your sample. Dual fiber option is designed for TD-THz spectroscopy. It allows a direct fiber coupling to a detector/emitter. Uncompressed seeder option delivers 3 ps linearly chirped pulses at 1030 nm for seeding Yb regenerative amplifiers.

SPECIFICATIONS

Model	LightWire FF50
Central wavelength	1064 nm
Compressed pulse duration	<150 fs
Output power	>40 mW (HP option: >150 mW)
Pulse energy	>1 nJ (HP option >5 nJ)
Dispersion pre-compensation	fixed ¹⁾ in a range $\pm 70000 \text{ fs}^2$
Bandwidth	20 nm
Optical output	FC/APC connector or collimated beam
Pulse repetition rate	30 MHz ²⁾
Beam quality	$M^2 < 1.5$
Pulse train monitoring	electrical SMA connector
Dimensions (stand-alone unit) (D×W×H)	230×110×50 mm
Weight	<2 kg
Power supply	100-240 V, 50-60 Hz AC or 12 V DC
Operating conditions	10-40 °C, humidity – not condensing

¹⁾ For tunable dispersion pre-compensation ask for the FemtoGrate option

²⁾ Other repetition rates are available on request

FEATURES

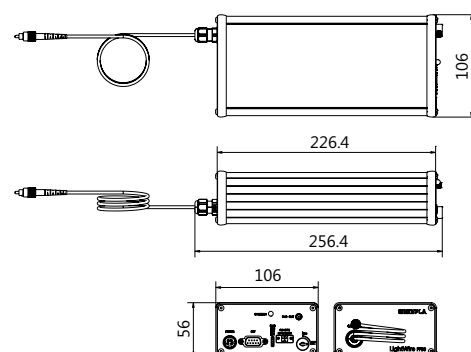
- <150 fs pulse duration
- > 40 mW output power
- 1064 nm central wavelength
- 30 MHz repetition rate
- $M^2 < 1.5$ beam quality
- Compact, rugged design
- Low maintenance
- Available in two versions: OEM module and stand-alone laser

APPLICATIONS

- Ultrafast spectroscopy
- Time-domain terahertz spectroscopy
- Nonlinear microscopy
- Amplifier seeding

OPTIONS

- **HP option** with amplifier for higher output power up to 150 mW
- **FemtoGrate** with free space compressor for pre-chirp tuning (also 1.4 times higher output power)
- **Dual fiber** output with fixed optical delay (0-5 ns)
- **Uncompressed** version with CWL 1030 nm for seeding Yb regenerative amplifiers



Outline drawings of LightWire FF50 series laser